RE: Miami STFate Modeling

Verhagen, Joelle SAJ to: Christopher McArthur 08/08/2011 12:44 PM

From: "Verhagen, Joelle SAJ" <Joelle.L.Verhagen@usace.army.mil>
To: Christopher McArthur/R4/USEPA/US@EPA

Hi Chris -

Thank you for explaining that the higher current velocities might result in increased mixing - I was only thinking of it in terms of the movement of the material out of the disposal area. We will be re-running the STFATE models using the velocities as given in the Miami SMMP and adding these data to the report in addition to the results of using the higher velocities.

Please let me know if you have any questions or comments.

Hope you had a good weekend!
Thanks,
Joelle

-----Original Message-----
From: Mcarthur.Christopher@epamail.epa.gov
[mailto:Mcarthur.Christopher@epamail.epa.gov]
Sent: Friday, August 05, 2011 6:14 PM
To: Verhagen, Joelle SAJ
Subject: Fw: Miami STFate Modeling

Joelle,

Generally higher current velocities will increase mixing and hence the dilution achieved. On the other hand, sometimes they will transport the plume out of the ODMDS box before it has had a chance to mix resulting in less dilution at the boundaries. So, I don't know if your results are conservative or not. If you would like, you can do an analysis of the dynamics at the ODMDS and write up the results to document why you think your values are appropriate or conservative and ask for a variance which we will consider. Or you can use the numbers that EPA developed as part of the SMMP that underwent agency and public review. The Corps is going to be asking for a lot of exceptions on this project already (sampling outside of the project limits, deviating from the QAPP on homogenization, high reporting limits, QA issues with hold times and improper sample handling, etc.). I would recommend trying to keep the number of exceptions to standard protocols to a minimum. Rerunning the model with the correct velocities shouldn't be that much work since they already have it set up.

I hope you have a good weekend.

- Chris

Christopher J. McArthur, P.E.
Environmental Engineer, Ocean Dumping Program Coordinator U.S. Environmental Protection Agency Region 4 Wetlands & Marine Regulatory Section

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Phone: (404) 562-9391, Fax: (404) 562-9343
email: mcarthur.christopher@epa.gov
http://www.epa.gov/region4/water/oceans/

----- Forwarded by Christopher McArthur/R4/USEPA/US on 08/05/2011 03:08 PM -----

From: Christopher McArthur/R4/USEPA/US
To: "Verhagen, Joelle SAJ" <Joelle.L.Verhagen@usace.army.mil>
Date: 08/05/2011 02:34 PM
Subject: Re: Miami STFate Modeling

Joelle,

Taylor used the statistical results from currents flowing in the direction of the Northeast quadrant only. The SMMP values are based on a median of all currents (all quadrants). The result is that Taylor overestimated the median current velocity as the currents in the NE quadrant are significantly great than in the other directions. The modeling should be done using the current values (and depths) presented in the 2008 SMMP.

- Chris

Christopher J. McArthur, P.E.
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Phone: (404) 562-9391, Fax: (404) 562-9343
email: mcarthur.christopher@epa.gov
http://www.epa.gov/region4/water/oceans/

From: "Verhagen, Joelle SAJ" <Joelle.L.Verhagen@usace.army.mil>
To: Christopher McArthur/R4/USEPA/US@EPA
Date: 08/05/2011 01:16 PM
Subject: Miami STFate Modeling

Hi Chris -

Attached is the Taylor report for the Miami STFATE modeling. On page 5 they show depth/current velocities.

X-Direction Velocity at Depth = 65.6 feet -3.99 ft/sec Z-Direction Velocity at Depth = 65.6 feet 1.32 ft/sec X-Direction Velocity at Depth = 272.3 feet

-1.93 ft/sec Z-Direction Velocity at Depth = 272.3 feet 0.64 ft/sec

Please confirm that this is correct and that we won't need to re-run any simulations.

I apologize for the confusion.

Also, pls. note that in the Taylor 2011 Miami 103 report, section 2.0, Taylor states that USACE ran bioassays on samples MH11-2 through MH11-5, but not on MH11-1. This is incorrect. Bioassays were conducted with MH11-1 but the results were not statistically more toxic than control or site water and no further evaluation was needed (SERIM 3.3.1)

Pls. let me know if you have any questions.
Thank you!
Joelle

Joelle Verhagen
Coastal Section
Environmental Branch
Planning Division
USACE, Jacksonville District

Phone: 904-232-2416
Email: Joelle.L.Verhagen@usace.army.mil

[attachment "ADDAMS_STFATE_Modeling_DRAFT_Report_07-28-2011.pdf" deleted by Christopher McArthur/R4/USEPA/US]

RE: FW: Conditions for Corps permit (UNCLASSIFIED) - volumes

Verhagen, Joelle SAJ to: Christopher McArthur 07/17/2012 04:23 PM
Cc: "Spinning, Jason J SAJ", "Clouser, Megan L SAJ"

From: "Verhagen, Joelle SAJ" <Joelle.L.Verhagen@usace.army.mil>
To: Christopher McArthur/R4/USEPA/US@EPA
Cc: "Spinning, Jason J SAJ" <Jason.J.Spinning@usace.army.mil>, "Clouser, Megan L SAJ" <Megan.L.Clouser@usace.army.mil>

1 attachment

Miami_permit_plates_berth_areas_rev_Oct_2011.pdf

Chris/Megan -

The following Berth areas will need to be in the permit:

Construction:
Fisherman's Channel Berths
LITB Berths (east half of LITB)
Total ~ 198,000 cy

Maintenance:
LITB Berths (west half of LITB)
Dodge Island Cut/Turning Basin Berths
Main Cut/TB Berths Total
Total ~ 31,000 cy

Please see attached for permit plates including construction and maintenance at berth areas.

The change in the volume estimate for new work for the berth areas (from volume estimate given the MPRSA 103 Evaluation, 190,552 cy, to the current best estimate, 198,000 cy) is based on recalculation of design distance from bulkhead.

Thank you,
Joelle

-----Original Message-----
From: Christopher McArthur [mailto:Mcarthur.Christopher@epamail.epa.gov]
Sent: Tuesday, July 17, 2012 3:27 PM
To: Verhagen, Joelle SAJ
Cc: Spinning, Jason J SAJ; Clouser, Megan L SAJ
Subject: RE: FW: Conditions for Corps permit (UNCLASSIFIED) - volumes

Joelle/Megan,

In looking at volumes, I was confused about the scope of the permit. I read it to only include the LITB berthing areas, not the other berthing areas or turning basins. There is also no mention of maintenance dredging in the draft permit just increasing dredge depth. The dredging limits should be more

clearly defined in the permit. Also, for the record I would still like an explanation for the increase in volumes of new work material (e.g. revised bathymetry 2012 v 2011; different calculation method, etc). My goal here is to make sure we have an enforceable permit, that the permit is consistent with the environmental documentation and that the permit is supported by the record.

- Chris

-
Christopher J. McArthur, P.E.
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61 Forsyth Street, SW
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http://www.epa.gov/region4/water/oceans/

Inactive hide details for "Verhagen, Joelle SAJ" ---07/09/2012 08:16:22 AM---Chris - The most recent volume estimates for new "Verhagen, Joelle SAJ" ---07/09/2012 08:16:22 AM---Chris - The most recent volume estimates for new work in the Port berth areas is 198,000 cy. This

From: "Verhagen, Joelle SAJ" <Joelle.L.Verhagen@usace.army.mil>
To: Christopher McArthur/R4/USEPA/US@EPA
Cc: "Clouser, Megan L SAJ" <Megan.L.Clouser@usace.army.mil>, "Spinning, Jason J SAJ" <Jason.J.Spinning@usace.army.mil>
Date: 07/09/2012 08:16 AM
Subject: RE: FW: Conditions for Corps permit (UNCLASSIFIED) - volumes

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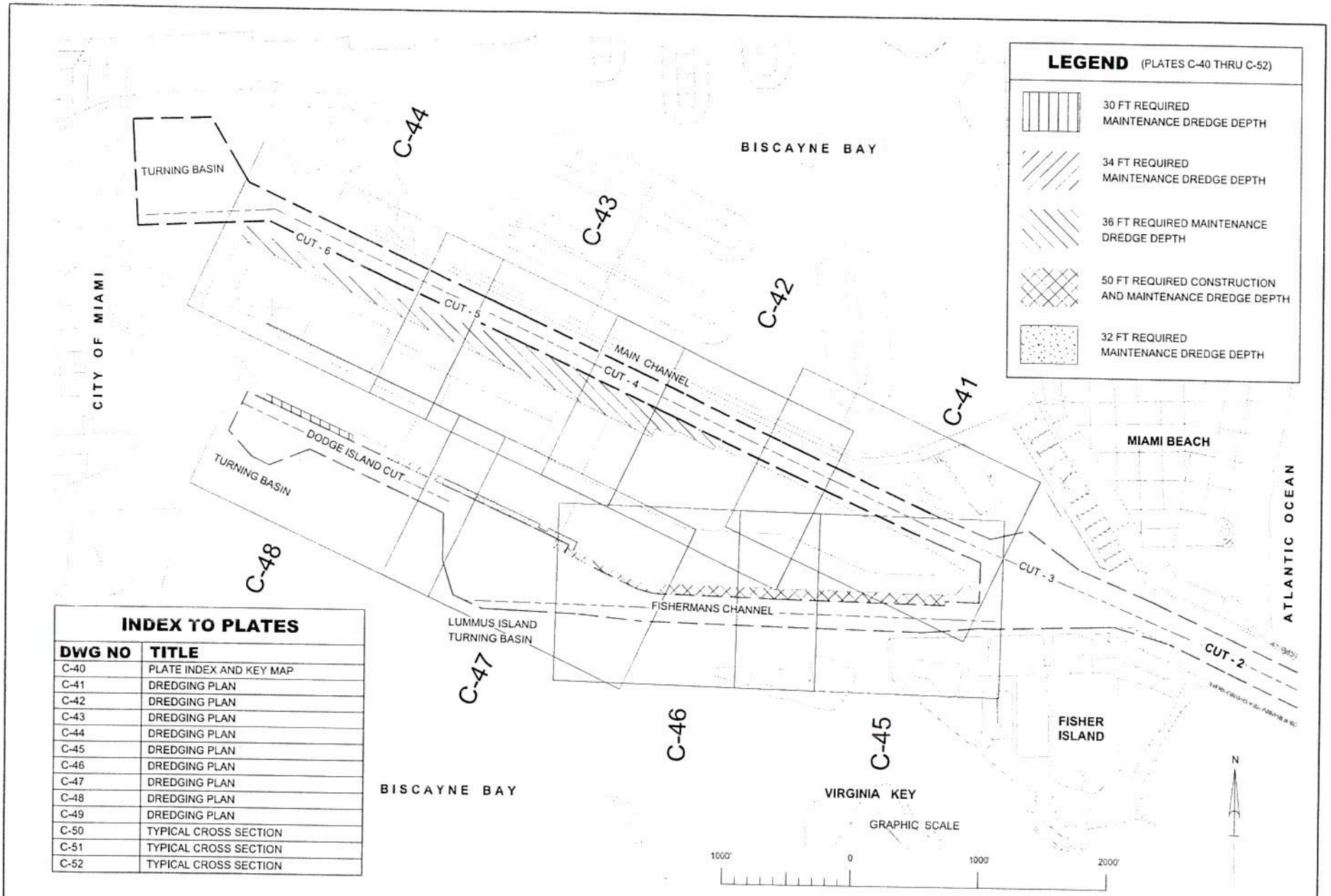
Chris -

The most recent volume estimates for new work in the Port berth areas is 198,000 cy. This has changed just slightly from the amount included in the evaluation that estimated ~190,000 cy.

Also, maintenance estimates (included in the evaluation) consist of ~5,000 cy from LITB berths, ~88,730 cy from combined areas Dodge Island Cut, Dodge Island Turning Basin, and Dodge Island Berthing Areas, and ~62,480 cy from Cut 4, Main Turning Basin, and associated Berthing Areas. Our project engineer has estimated from this the total Port berth associated maintenance material will be approximately 31,000 cy.

This brings the total estimated Port associated material volumes to ~229,000cy. We caution against using the 'exact' estimates as the process of dredging is never precise or exact and natural events can further change these. Pls. consider using an additional percentage of this estimatd volume for the permit. Should 'exact' estimate be used for the Port permit than any small changes will require a permit modification at that time.

Pls. let me know if you have any questions.



INDEX TO PLATES

DWG NO	TITLE
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C-49	DREDGING PLAN
C-50	TYPICAL CROSS SECTION
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C-52	TYPICAL CROSS SECTION

US Army Corps of Engineers
Jacksonville District

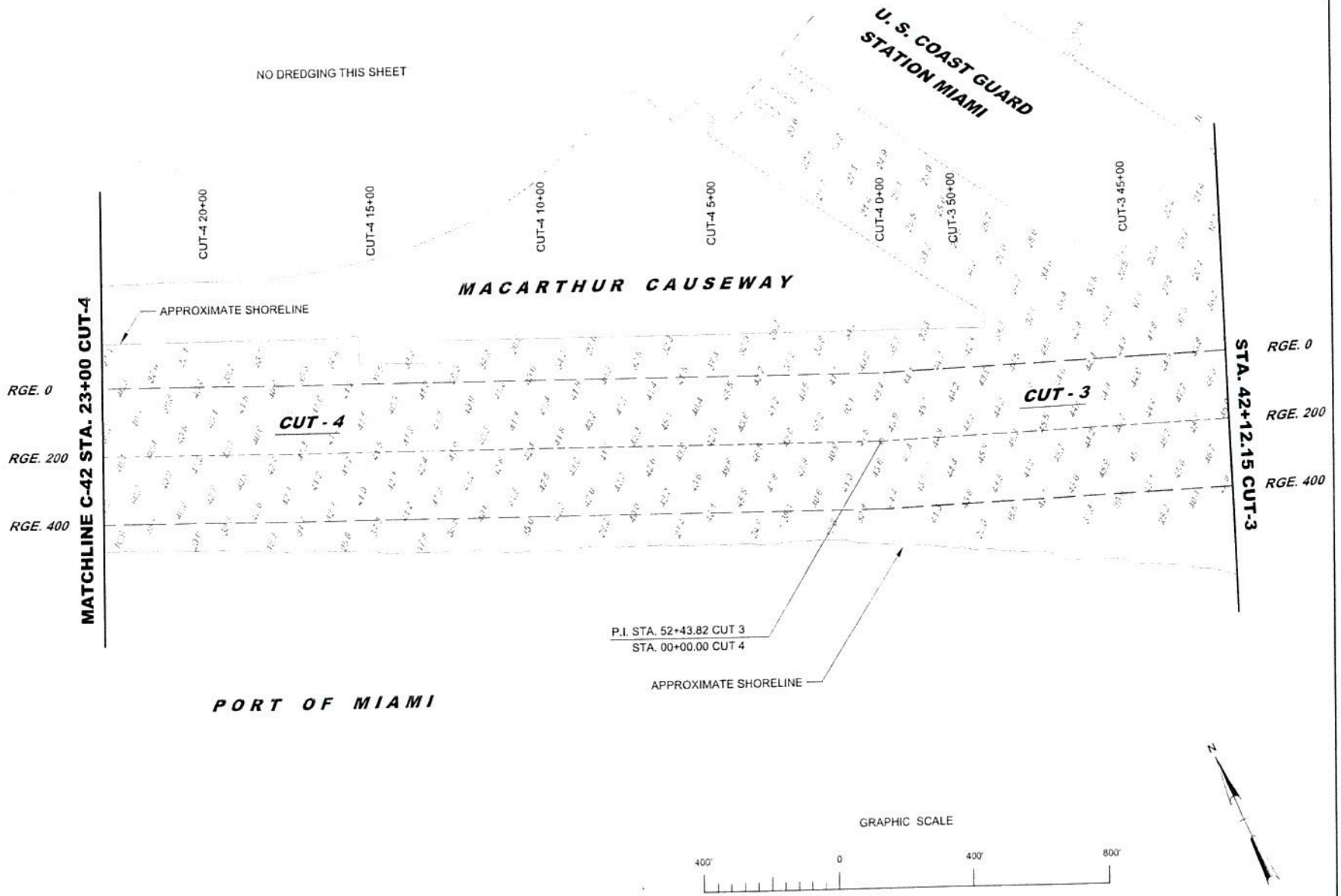
WQC PERMIT PLATE
NOT FOR CONSTRUCTION

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Dsn by: SRC
Dwn by: MR2
Ckd by: LRP
Dated: JAN 2011
Revised: JUL 2011

MIAMI HARBOR, FLORIDA
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING
WQC PERMIT PLATE
BERTHING AREAS
PLATE INDEX AND KEY MAP

PLATE
C-40



US Army Corps of Engineers
Jacksonville District

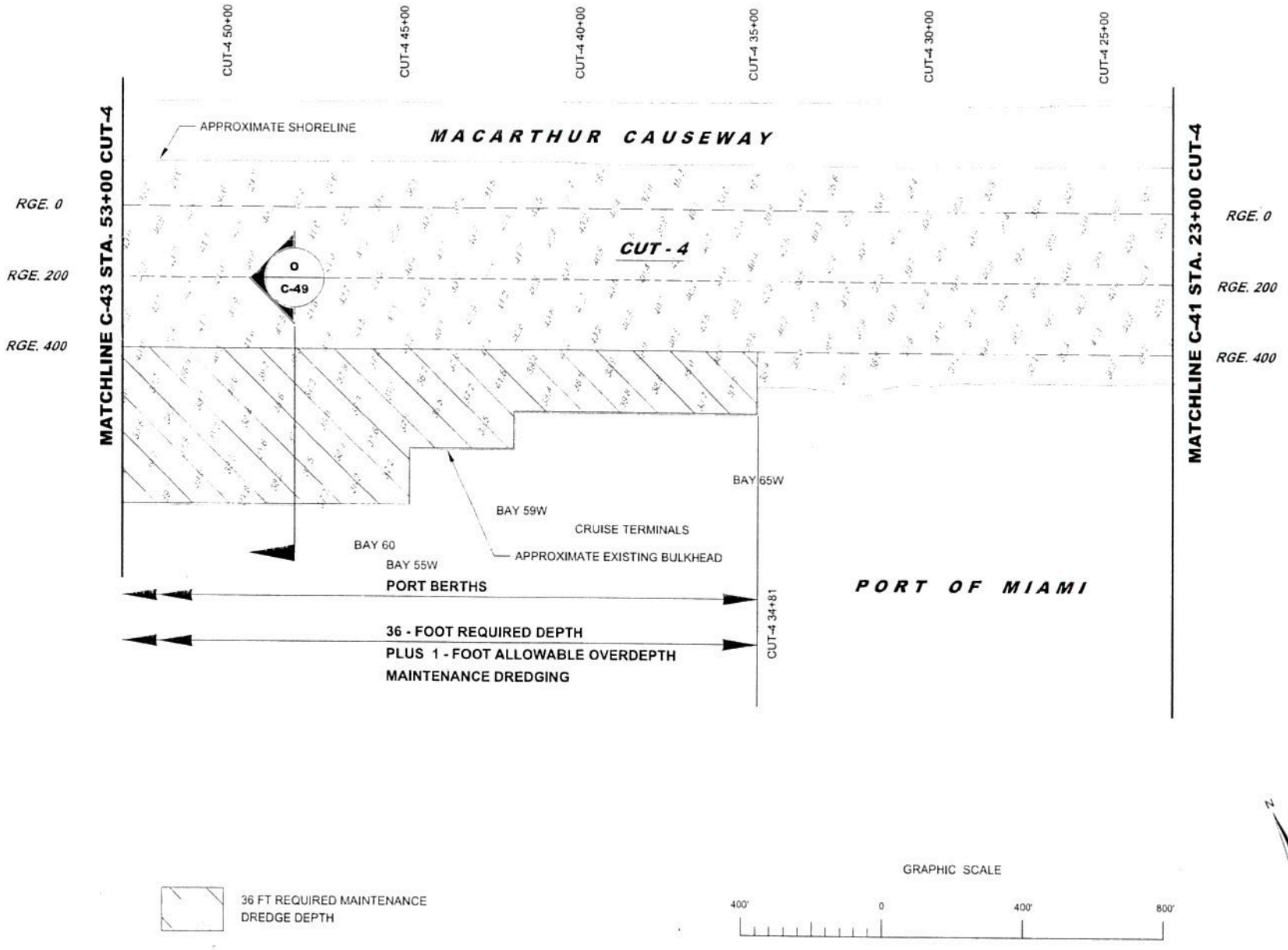
WQC PERMIT PLATE
NOT FOR CONSTRUCTION

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Dsn by:	SRC
Dwn by:	MR2
Ckd by:	LRP
Dated:	JANUARY 2011

MIAMI HARBOR, FLORIDA
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING
WQC PERMIT PLATE
BERTHING AREAS
DREDGING PLAN

PLATE
C-41



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Jacksonville District

WQC PERMIT PLATE
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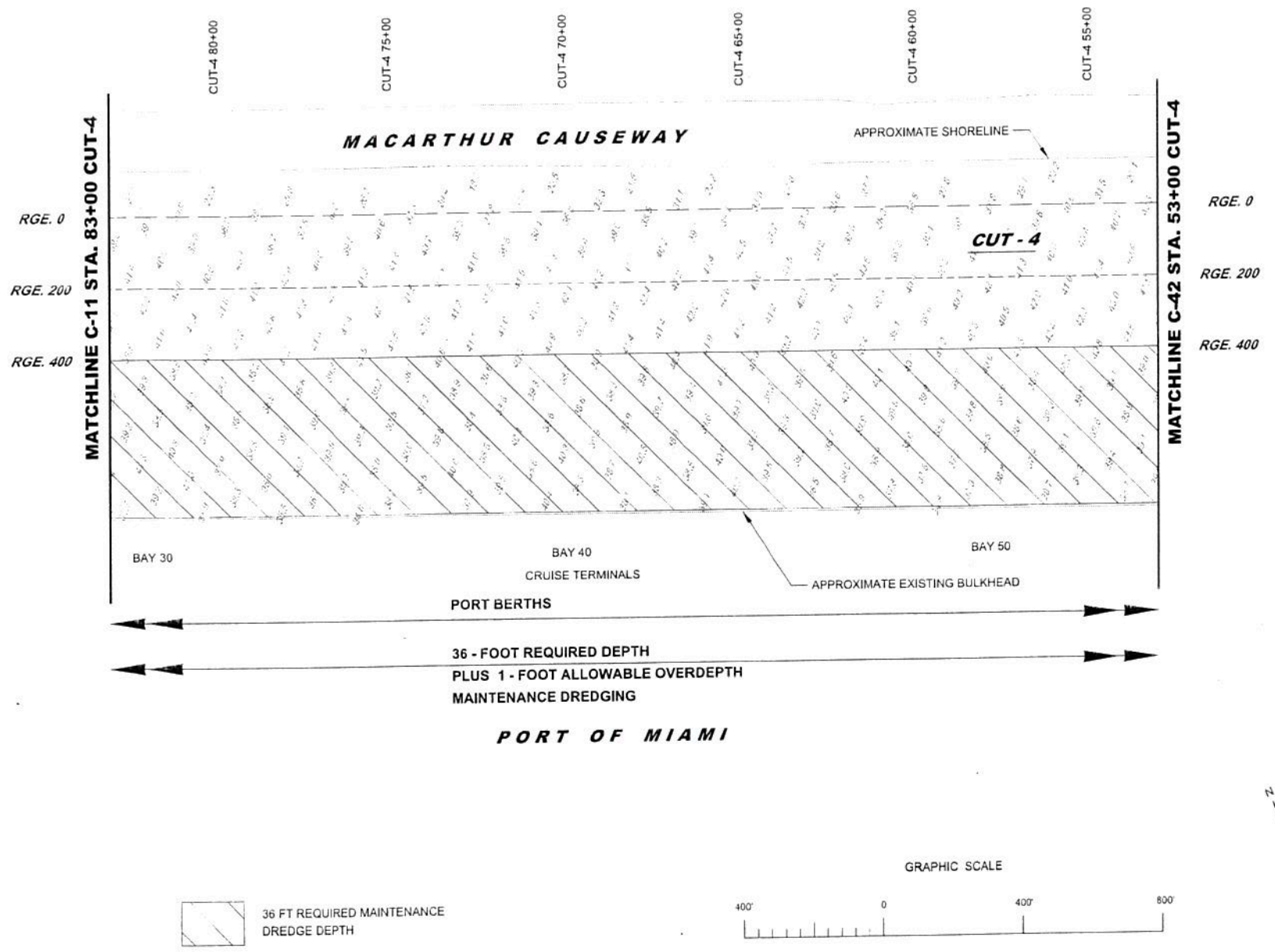
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Dsn by: SRC
Dwn by: MR2
Ckd by: LRP
Dated: JANUARY 2011

MIAMI HARBOR, FLORIDA
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING
WQC PERMIT PLATE
BERTHING AREAS
DREDGING PLAN

PLATE
C-42



US Army Corps of Engineers
Jacksonville District

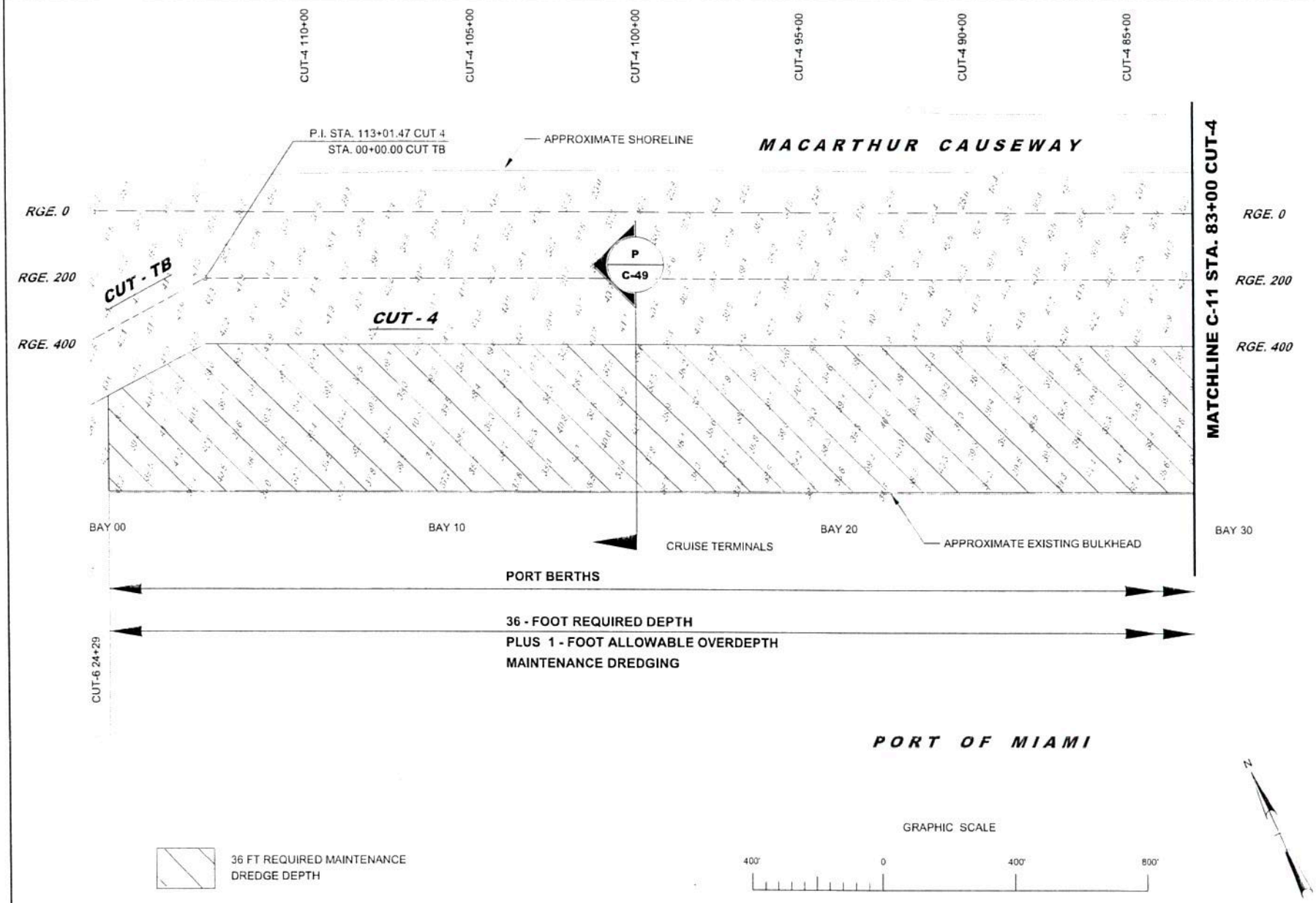
WQC PERMIT PLATE
NOT FOR CONSTRUCTION

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

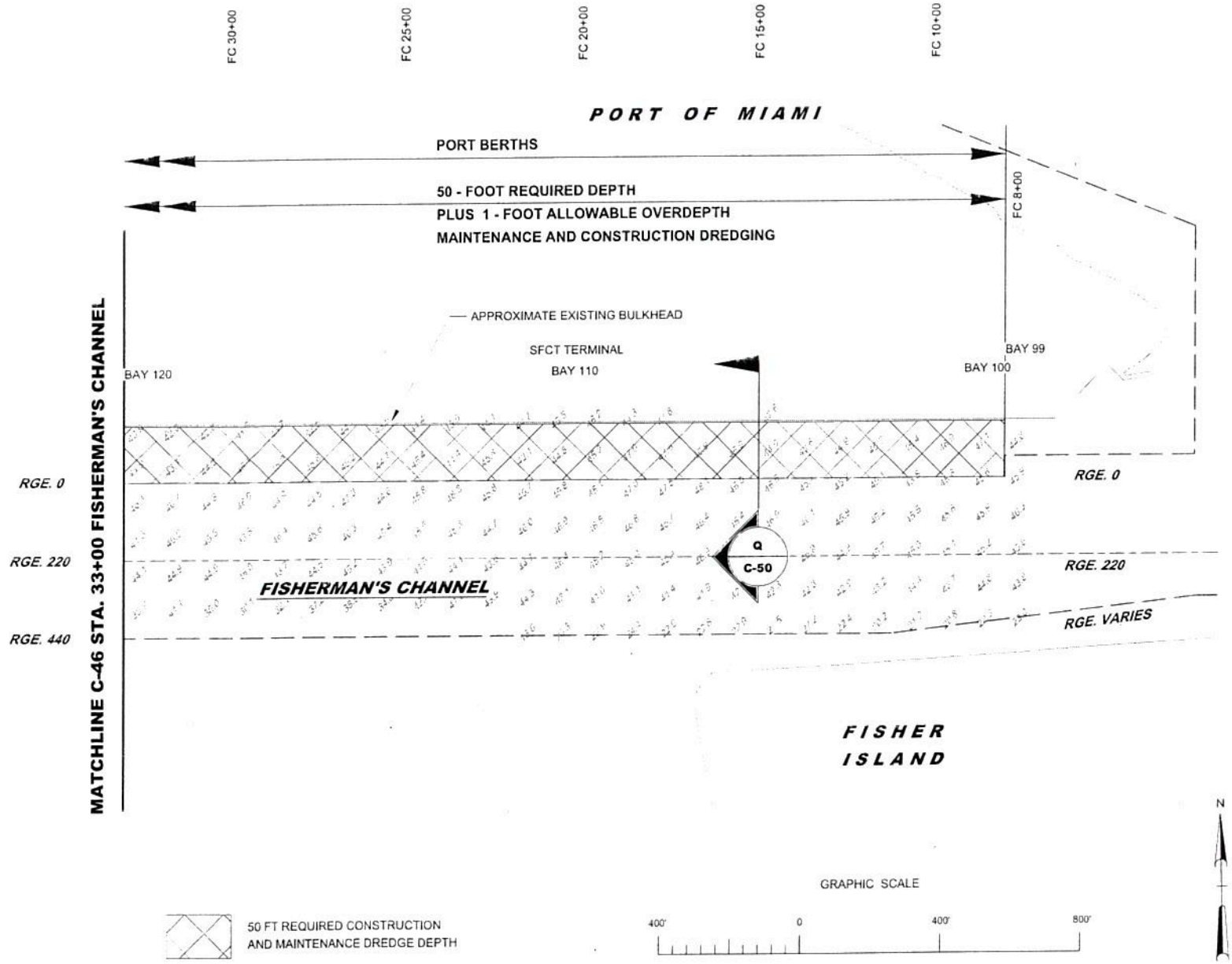
Dsn by:	SRC
Dwn by:	MR2
Ckd by:	LRP
Dated:	JAN 2011
Revised:	OCT 2011

MIAMI HARBOR, FLORIDA
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING
WQC PERMIT PLATE
BERTHING AREAS
DREDGING PLAN

PLATE
C-43



US Army Corps of Engineers - Jacksonville District	WQC PERMIT PLATE NOT FOR CONSTRUCTION **DEPARTMENT OF THE ARMY** **JACKSONVILLE DISTRICT, CORPS OF ENGINEERS** **JACKSONVILLE, FLORIDA**	Dsn by: SRC Dwn by: MR2 Ckd by: LRP Dated: JANUARY 2011	**MIAMI HARBOR, FLORIDA** **CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING** **WQC PERMIT PLATE** **BERTHING AREAS** **DREDGING PLAN**	PLATE C-44



US Army Corps of Engineers
Jacksonville District

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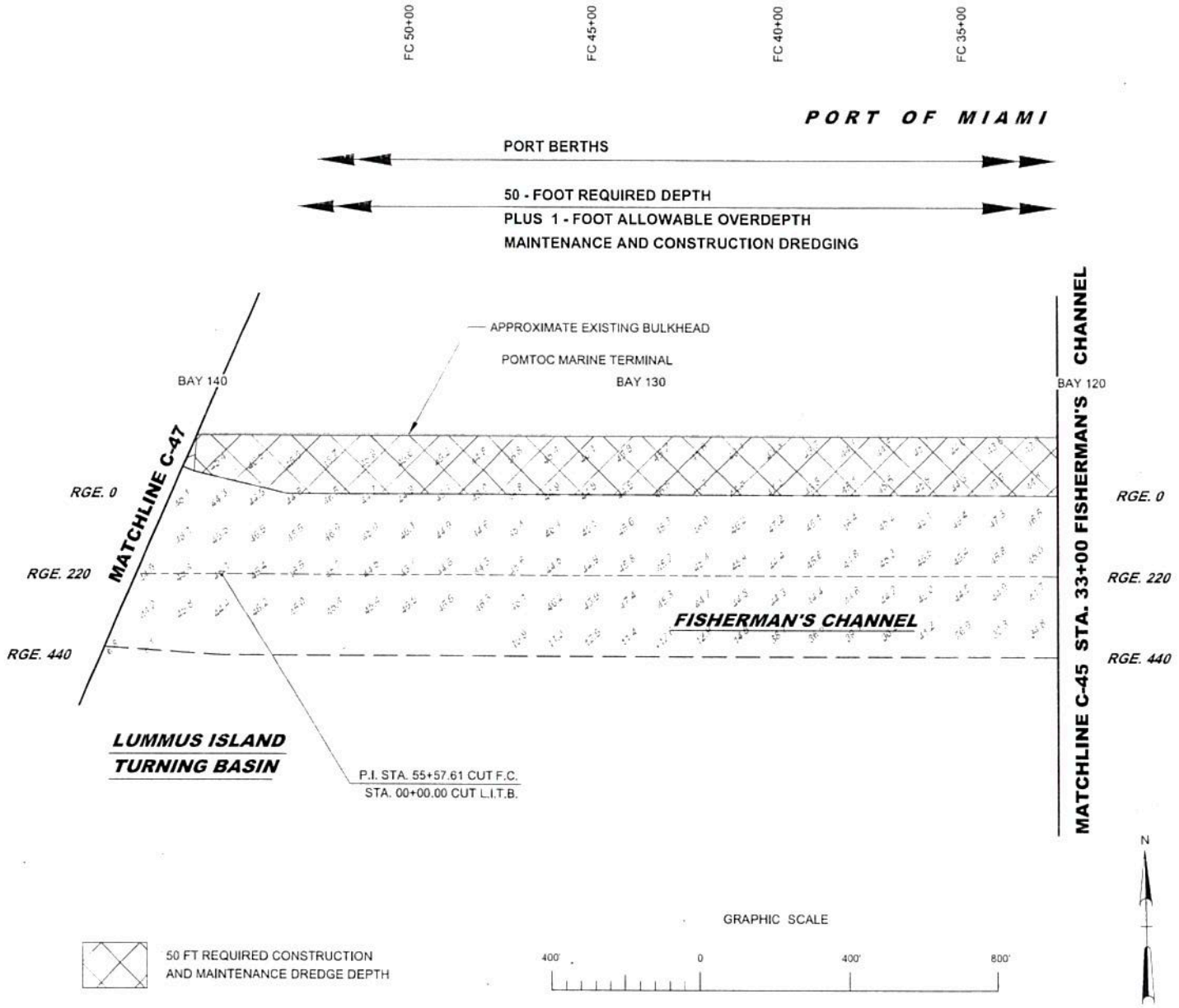
DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Dsn by:	SRC
Dwn by:	MR2
Ckd by:	LRP
Dated:	JAN 2011
Revised:	OCT 2011

MIAMI HARBOR, FLORIDA
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING
WQC PERMIT PLATE
BERTHING AREAS
DREDGING PLAN

PLATE
C-45



US Army Corps of Engineers
Jacksonville District

WQC PERMIT PLATE
NOT FOR CONSTRUCTION

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
JACKSONVILLE, FLORIDA

Dsn by:	SRC
Dwn by:	MR2
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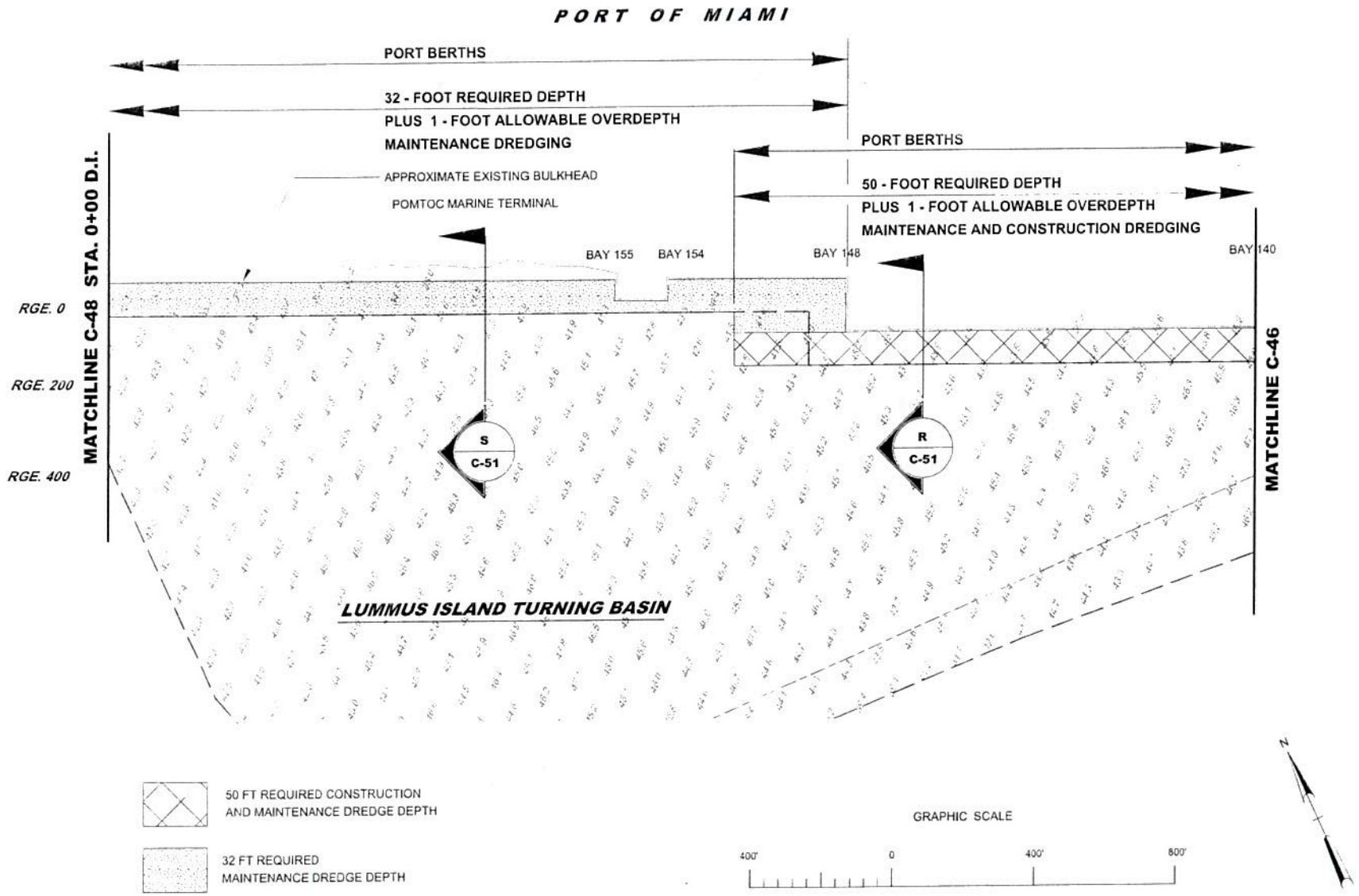
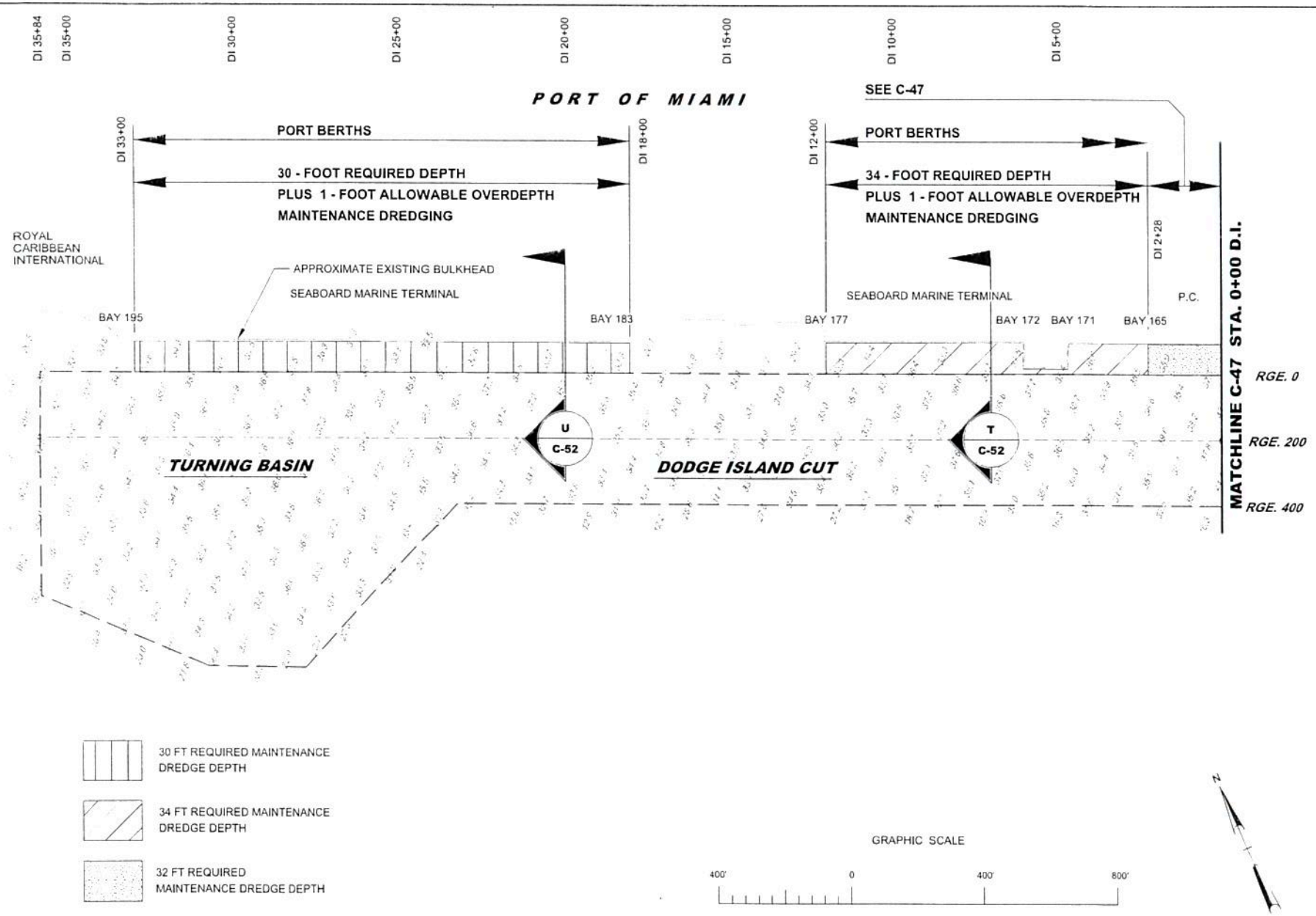
Dated:	JAN 2011
Revised:	OCT 2011

MIAMI HARBOR, FLORIDA
CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING
WQC PERMIT PLATE
BERTHING AREAS
DREDGING PLAN

PLATE
C-46



US Army Corps of Engineers Jacksonville District	WQC PERMIT PLATE NOT FOR CONSTRUCTION	Dsn by: SRC Dwn by: MR2 Ckd by: LRP Dated: JANUARY 2011	**MIAMI HARBOR, FLORIDA** **CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING** **WQC PERMIT PLATE** **BERTHING AREAS** **DREDGING PLAN**	PLATE C-47
	DEPARTMENT OF THE ARMY **JACKSONVILLE DISTRICT, CORPS OF ENGINEERS** **JACKSONVILLE, FLORIDA**			



US Army Corps of Engineers · Jacksonville District	WQC PERMIT PLATE NOT FOR CONSTRUCTION **DEPARTMENT OF THE ARMY** **JACKSONVILLE DISTRICT, CORPS OF ENGINEERS** **JACKSONVILLE, FLORIDA**	Dsn by: SRC Dwn by: MR2 Ckd by: LRP Dated: JANUARY 2011	**MIAMI HARBOR, FLORIDA** **CONSTRUCTION DREDGING (PHASE 3) AND MAINTENANCE DREDGING** **WQC PERMIT PLATE** **BERTHING AREAS** **DREDGING PLAN**	PLATE C-48

Re: Final concurrence (UNCLASSIFIED)

Christopher McArthur to: Clouser, Megan L SAJ
Bcc: Christopher McArthur

07/24/2012 05:22 PM

From: Christopher McArthur/R4/USEPA/US
To: "Clouser, Megan L SAJ" <Megan.L.Clouser@usace.army.mil>
Bcc: Christopher McArthur/R4/USEPA/US

Megan,

I have reviewed the decision document including the permit conditions and have found them consistent with the Miami ODMDS Site Management and Monitoring Plan (SMMP) and EPA's concurrence for the Miami Harbor Phase III Deepening Project and maintenance dredging pursuant to Section 103 of the Marine Protection Research and Sanctuaries Act. I have one comment regarding condition L on page 12. This condition appears to be a holdover from permits issued in Northeast Florida. You may want to confirm that NMFS requires observers during this time period. It is not a requirement of the SMMP. There is some template language in Appendix B of the SMMP regarding ESA Regional Biological Opinions that you may want to use instead. Please provide me a copy of the final permit once issued. Thank you for coordinating with us on this permit.

- Chris

Christopher J. McArthur, P.E.
Environmental Engineer, Ocean Dumping Program Coordinator
U.S. Environmental Protection Agency Region 4
Wetlands & Marine Regulatory Section
61 Forsyth Street, SW
Atlanta, GA 30303
Phone: (404) 562-9391, Fax: (404) 562-9343
email: mcarthur.christopher@epa.gov
http://www.epa.gov/region4/water/oceans/

"Clouser, Megan L SAJ" Classification: UNCLASSIFIED Caveats:... 07/24/2012 04:28:21 PM

From: "Clouser, Megan L SAJ" <Megan.L.Clouser@usace.army.mil>
To: Christopher McArthur/R4/USEPA/US@EPA
Date: 07/24/2012 04:28 PM
Subject: Final concurrence (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

Good afternoon Chris,
I just sent you a copy of the revised decision document. I have added the clarifying language which states, "The volume of material that will be removed along the Fisherman's Channel Berths which is considered new dredging is ~ 198,000 cy. The volume of material that will be maintenance dredged along the Dodge Island Cut/Turning Basin Berths Main Cut/TB Berths Total is ~ 31,000 cy."

The new dredge along Fisherman's Channel is -50 feet with an overdepth dredge

of -1.

Please let me know if you have any questions/clarifications. If not, please let me know if EPA will provide their 103 concurrence for this project.

Regards,

Megan Clouser
US Army Corps of Engineers
9900 SW 107th Ave., Suite 203
Miami, FL 33176

305-526-7182

Classification: UNCLASSIFIED
Caveats: NONE